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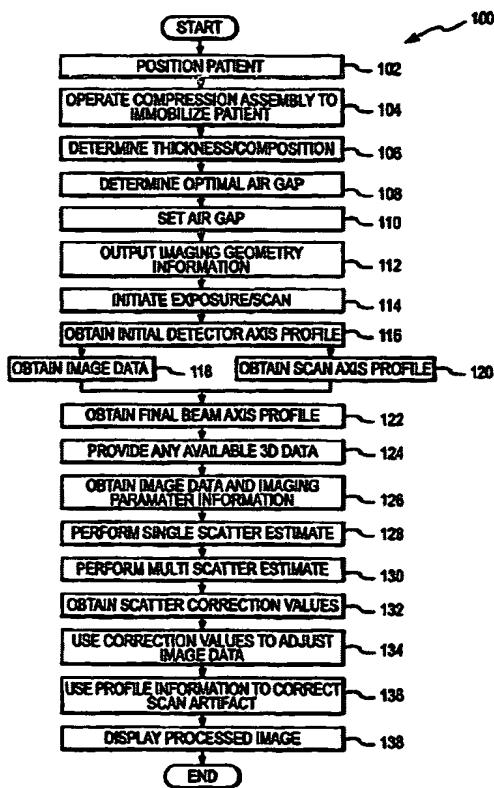
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(54) Title: SCATTER REJECTION FOR COMPOSITE MEDICAL IMAGING SYSTEMS



(57) **Abstract:** Scatter effects are reduced in a radiographic imaging device, such as a digital slot scan mammographic imaging device, by reducing detected scatter and processing detector information to compensate for scatter effects. In one embodiment, a digital mammographic imaging system (10) includes a source (24) for transmitting a narrow beam (28) and a detector assembly (32) for detecting the beam (28). The beam (28) and the detector assembly (32) are synchronously scanned across the patient's breast (48) to obtain an image. Collimator slats (74) are provided at the leading and trailing edges of the detector to reduce detected scatter. Additionally, attenuators (76 and 92) are provided at the ends of the scanned motion and at the anterior edge of the detector array to assist in determining a spatial intensity profile. The spatial intensity profile information together with other imaging signal and patient dependent parameters are used in image processing to estimate and compensate for various scatter effects including single and multiple scatters and Compton and Rayleigh scatter.